Active Ageing Up and Down:
Is psychology loosing its role in active or healthy ageing?

Rocío Fernández-Ballesteros
Emeritus professor, Autonoma University of Madrid (Spain)

Ageing is a complex process and an interdisciplinary phenomenon which scientific study required the bio-psycho-social concur and collaboration. Human aging has been considered mainly as the effect of age into the human organism. Moreover, along the history -founded by Metchnicoff (zoologist and immunologist) in 1903- the Gerontology has been founded as the interdisciplinar science of ageing, age and the aged (Birren, 1995), therefore, supported by bio-psycho-social branch of sciences, begun and continue being mainly patronage by biomedical disciplines. A good example is the case of the "new" paradigm in gerontology, "active ageing", and its short story in Europe.

1. *Healthy, active and successful aging*

Since the final third of the 20th century and parallel to those spectacular demographic changes (for example, see Christensen et al., 2009), a new paradigm of gerontology has been developed: healthy, successful, vital, active, or productive ageing emerges at the same time, postulating several forms of ageing to be considered; beyond "usual" and "pathological" ageing, "successful" ageing is discussed (for a review, see among others: Baltes & Baltes, 1990; Fernández-Ballesteros, 2008; Fernández-Ballesteros, Benetos & Robine, 2019; Fries & Crapo 1981; Rowe & Khan, 1987, 1997).

After this brief historical description, it can be concluded that in answer to the potential threat to ageing from population and individual ageing phenomena, postponing illnesses and functional disabilities is a goal for both the individual and society; for example, several political efforts at different levels have been planned by national and international organizations in order to increase healthy ageing (successful, active, vital, productive aging; e.g.: UN, 2002, UNECE, 2002; WHO, 2002, 2015, 2018; EU: Partnership AHA). Thus, over recent decades there have been many more efforts in terms of political actions without corresponding investment in research as to the determinants of healthy ageing. These international efforts have had broad repercussions , with the setting up of programs for promoting active ageing; nevertheless, the WHO (2015, 2018), without any evaluation of active ageing set of policies implemented around the world, has taken a step backwards to "*healthy" ageing,* thereby reducing it to functionality, and the worst, eliminating any reference to psychosocial conditions (Fernández-Ballesteros (2017).

A last good example about the Active ageing "Up and Down" in this bio-medical reductionism of this renew concept into the European Partnership of Active and Healthy Aging (EP-AHA) since it is mainly devoted to *frailty* instead of *healthy or active* ageing. Finally, this reductionism does not come from the way ageing is operationalized but, also, in its determinants.

2. Genetic vs Environmental contributors to active and healthy longevity.

Two major constructs have been considered in order to explain *why* some people live long actively and healthier and others do not: *genetic* (or so call *intrinsic)* components and *environmental* (or *extrinsic)* factors have received the most research interest and investment in empirical studies in demographics and bio-medical contexts attributing 25% of longevity to genetic and 75% to environmental factors, including psycho-behavioural aspects (PB) such as life styles, neglecting (or embedding as environmental/extrinsic? factors) psychological and behavioural conditions but its contribution -in comparison with "other" environmental factors- remain unknown.

Let us only mention here -both from an epigenetic standpoint as well as from socio-cognitive perspectives- that this polar classification supported by an bio-medical perspective could lead to *misconceptions* in this field since *both factors are interdependent*, or in other words, intrinsic or genetic factors are to some extent influenced by those extrinsic or environmental conditions, and these transact also with the others. Therefore, trying to quantify the contribution of these two types of factors - not mutually exclusive - to individual differences in ageing, survival and longevity without taking into consideration their mutual interactions could be considered an epistemological and methodological flaw and a big problematic issue.

In a step forward from the interaction between intrinsic/genetic and extrinsic/environmental factors, taking into consideration influences in longevity in interaction with lifestyle (behavioural) factors, compelling results are reported by Lindahl-Jacobsen and Christensen (2018), who conclude that "the increasing evidence that the environment interacts with genes to alter their causal effects makes an integration of the environmental factors in the exploration for genes associated with longevity a key component in order to understand the mechanisms of aging". It is important to underline that this is an exception and there are no studies regarding in what extent other Psycho-Behavioural factors contribute to active longevity.

Nevertheless, it is well known that individual differences in positive emotion, some personality attribute, and intelligence characteristics are accounted for by genetics; thus, as Vaupel et al. stated, **"**20 to 25% of the variation in adult life-spans can be attributed to genetic variation among individuals; heritability of life-span is also modest for a variety of other species. The possibility that polymorphisms may play an increasing role with age is supported by evidence of increases with age in the genetic component of variation in *both cognitive and physical ability"* (Vaupel et al.,1998 p. 859, italics added).

In sum, psychological factors are both outcomes of active and healthy aging as well as determinants factors of the way we age across the long life course. Gerontologists must take into consideration this issue from a interdisciplinary perspective taken into consideration psycho-behavioural factors, developing a broad research program in order to determine in what extent those psycho-behavioral factors contribute to healthy/actively longevity and survival.

References

Bandura, A. (1986). Social foundation of thoughts and actions. Englewood Cliffs, Ca, Prentice Hall.

Baltes, P.B. & Baltes, M.M. (1990b). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P.B. Baltes & M.M. Baltes, (Eds.) (1990a). *Successful aging: perspectives from the behavioural sciences.* Cambridge UK: Cambridge University Press.

Fernández-Ballesteros, R. (Dir.) (2003) Vivir con Vitalidad (5 Vols.) Madrid: Ed. Pirámide.

Fernández-Ballesteros, R. (2008). Active Aging. The Contribution of Psychology. Göttingen: Hogrefe.

Fernández-Ballesteros, R, Zamarrón ;M.D, López BravoMD, Molina, MA; Díez-Nicolás, J., Montero P. and Schettini,R. (2012): Successful aging. Criteria and Predictors. *Psychology in Spain, 15* (1), 94-101.

Fernandez-Ballesteros, R. Benetos, A. & Robine, J.M. (Eds.) (2019). *Cambridge Handbook of Successful Aging*. New York: Cambridge Press.

Fries, J. and Crapo,L.M. (1981). *Vitality and Aging*. New York: Freeman &Co.

Lindahl-Jacobsen,R and Christensen,K. (2018) Gene–Lifestyle Interactions in Longevity. In R. Fernandez-Ballesteros, A. Benetos & J.M.Robine (Eds.) (2019). *Cambridge Handbook of Successful Aging*. New York: Cambridge Press.

Rowe JW, Kahn RL (1987).Human aging: usual and successful. *Science.237*(4811):143-9.

Rowe JW, Kahn RL (1997). Successful aging. *The Gerontologist,37* (4), 433-40.

UN (2015). *World Population Aging Repor*t. New York: United Nations.

UN (2017). *World Population Aging Repor*t. New York: United Nations.

Vaupel W., Carey, J.R., Christensen, K., Johnson, T.E., Yashin, A.I., Holm, N.V., et al (1998) Biodemographic Trajectories of Longevity. Science, 280, 855-860.

WHO (2002). Active ageing. A policy framework.Geneva

WHO (2012). *Active Ageing. A Policy framework*. Geneva: World Health Organization.

WHO (2015, 2017). *World Report on Ageing and Health*. Geneva: World Health Organization.